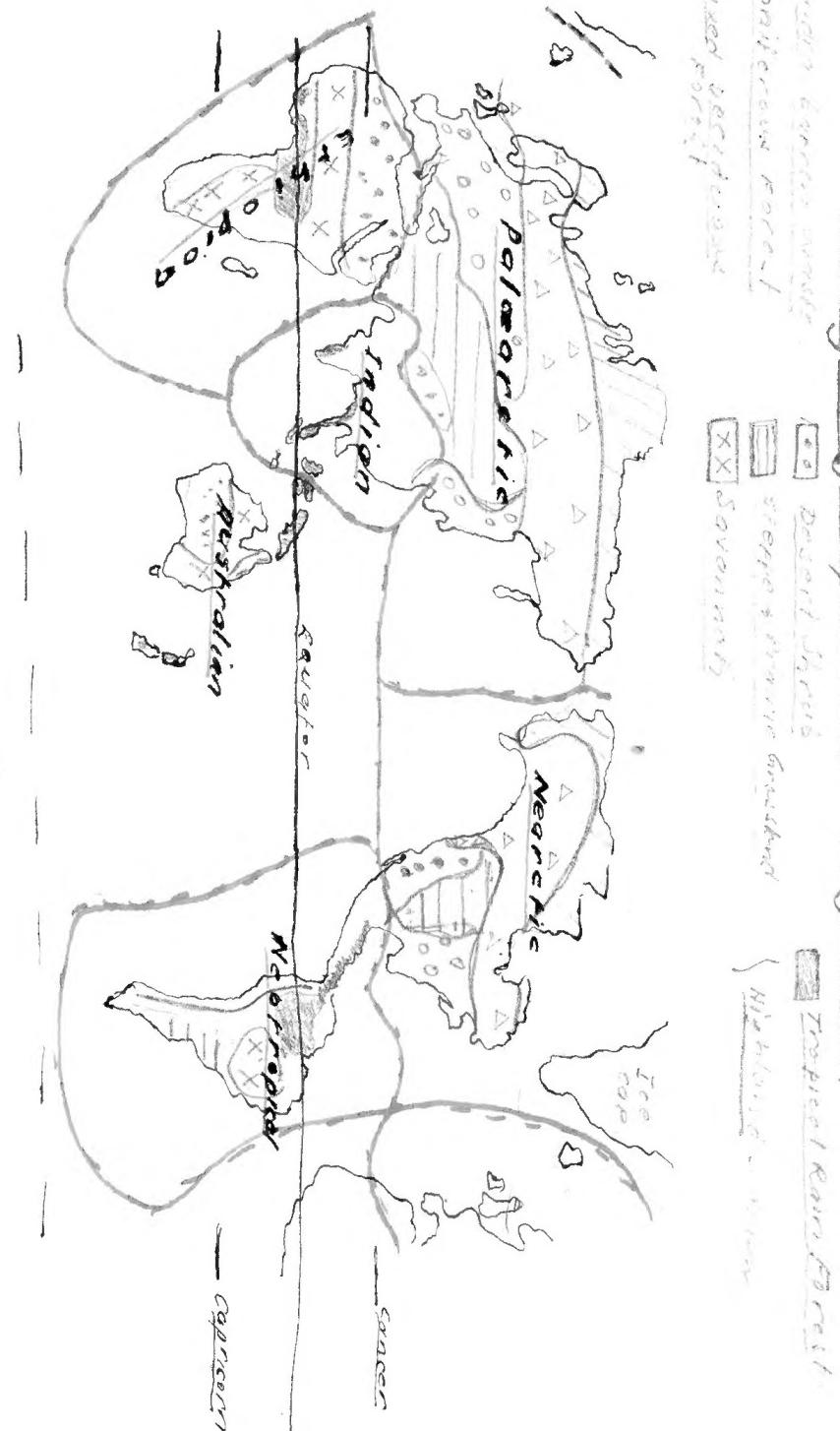


BIRDS
of
THE WORLD

Koogeographical Regions



Notes on Geographic Regions and their Avifauna

Palearctic Region

Tundra, Conif. Forest, Decid. Forest, Steppe., seacoast

Crows Finches larks warblers hedge-sparrows
grouse pheasants doves

Nearctic Regions

Tundra, Conifer, Steppe, Desert shrub, Decid. Forest.

Gathocidae, Melagardae, Meglodytidae,
Nimidae, Viceronidae, Parulidae (wood warbler)
Chamaelidae (^(Conifer) _{Wren-tit})

Ethiopian Regius

Desert Shrub, Savannah, Trop. Rain forest.

Stech, mouse bird, plantain-eaters, secretary birds
molefa vulture.

Indian Region

Tropical evergreen forest, plains

Broadbills: Sunbills, Drongos, mynas,
Hoicks etc.

Australian Birds

desert shrubbs, savannas, tropic rainforest

Kangaroo, cassowary, lyrebird., birds, potoroo, possum,
magpie, cock, pachycaphoda, parrot, malleefuge

Neotropical Region

Trop. rain forest, savannahs, steppe & grasslands
Hoas

Hooded, crested, toucans, jacanas,
motmots, tinamous, pheas

Ratite: the word Ratite is used in a vernacular sense only, nowadays for what must be regarded as a polyphyletic group composed of the following order:
Struthiones, Apteryges, Casuarii
Rhea, & crypturus; some would combine the last two which are Sth American. The Ratites are also referred to by various authors as "Struthionids" or "Palaeognathes".
— Condon SAD Vol 22. 4. 44

Under Sphenisciformes
(may diff. position + spelling)

Spheniscidae Penguins

Related to Petrels - may be
Flightless - differ from all birds in having
no developed flight feathers for wings.
Flippers used only for swimming - but only
flippers used in swimming. feet sketch
out - used for steering. When under
water some speed up by beats - .
Distrub.: Humboldt Penguin north to Peru &
north Chile. Magellan Penguin west to

Galapagos & Perug. (Spheniscus mendiculus)
only one confined to tropics - just north of
equator. All over subtropical and antarctic seas,
otherwise all over continent etc.

Habits: Drink sea water. Some fresh
also. Eggs 1, 2, 3. Large & worn out
egg - both stand & incubate - on feet and
flat of skin. Can feed toes & feet - purple
webbed. Glandular & like others
brood in normal fashion - .

N/B 9/10 of dead - markings worn off - on head
Bodies under water great deal.
Come ashore for roosts mostly.

16-17 species.

Order Struthioniformes
Family Struthionidae - ostriches.
Distr. Africa & S. Asia.
Chicks 2 to 3 only 3-5+4d. Penis developed.
Cocca &泄殖腔 enormous. Wings short,
in perfect soft plumage. Tail moderate.
Habitat. ~~deserts~~ ^{scrubs} - eaten by lions and great birds
in great numbers. Polygamous -
all hens of 1 flock lay - some nest. Incubation
of ♂ but occasionally ♀ also.
Habitat Plains & scrub land. Parties 5-12.
Eggs - creamy white - in sandy hollows 10-30
1 sp. 3-4 Lays sp. - 1 Spur extant 1941
Voice Booming roar.
Young Hatched in 10 days. Numerous Polygyny
10%

Order Rheiformes.
Family Rheidae - Rheas.
Description. 3 front toes. Cocca large. Wings
short in perfect soft feathers. Tail not apparent.
Distribution N. America : Bolivia argentina,
Uruguay, Brazil, Paraguay.
Habitat Plains, mesocliny grass.
habitats was buried with holes 10-15 cm. & balls
20 cm up to 20-30 cm. new & many others
young.
Voice Booming. Polygynous. May lay 30-60 eggs -
one nest & down. 3-4 d. Egg golden
yellow & hard.
(Hudson) Biocellaria : very long legs feathered
- tail stiff not much. Young greyish black &
white. wings other.
1/2 Helanias Catbirds of the Americas gives two
genera sp. Mexican. 2-3-4.
Play. 2-4.

Order Casuariformes.

Family: Casuariidae.: Cassowaries

~~Character~~ Head & base of culmen with elevated helmet. Two long - middle longer, outer longer, inner & enclosed with wing bone of fibula. claws - wings webbed ^{not a pectoral} tail. Diet Pigs & subways. All. Vth Inst.
to New Zealand.

Habitat Scrub.

Male. Rich purple bill

~~Abattoir~~ sp. - 3' 4" " 60". 5' 2" of the tail.
♀. ♂ Scrub?

Sp. 2 -

Order Casuariformes.

Family Dromaiidae: Emus.

Character very small, it not apparent. Three times one shorter.

Dust Bath.

Order: Apterygiformes

Fam: Apterygidae: Kiwis

C. kiwi: Bill long, ovoid, tip of wings
undivided, covert well prettles, tail
not apparent. Toes 3 before & short hind one

D. I. New Zealand

Habitat: damp dense forest - feeding low -
wet rocks, grass. Food: Worms, insect
larvae etc., vegetable stalks.

Habit: drink little if any..

Voice: shrill cry,

Nesting: 1-3 eggs smooth white

Breeding: Mar. - Oct. clutch 1.

Incubation:

Order Tinamiformes (Crypture) \rightarrow nest ^{8 months}

Fam: Tinamidae: Tinamous

Characters: superficially like partridge.

Wing short concave tips - mostly 4 -
cornered, 3 find tail when spread, high
Neck feathers check bony, resemble young of
some Ratites. Oviducts & bowl ^{500-1000 gds}

Distribution: Neotropical only.

Habitat: low forest, some open country,
scrubs, mountainous. Non-mix with

Habits: Polyandry 1 ♀ to many ♂. Ground birds
mellow whistle. Gobbling parts include etc. Nest
on ground under bush or only scrubbed

Eggs: unusual: Burmese metal or glazed ^{porcelain}
various colors porcelain, green, chocolate.

Tarsalia present, well developed heel

Order Gaviiformes

Form: Gulls-like. Divers (Chooz - U.S.A.)

Habits: Walks on land with other birds.

Front toes united by web. Tarsal spur, stiff.
Foot propels diving birds. Plumage harsh,
not soft & fine. Upper parts Young, not striped.
Only distantly (yarn) related to Gulls.

Distribution: Northern portion of Holocene -
Circum-Arctic.

Habitat: Lakes in well forested, stony or moraine
country. Very broad range. E. Asia (mainly)

Habits: very rapid dive & swim - capable of
long submerge like sub. well lead up only
occasionally birds open water. Flight swift
& direct descent may take etc. below

Nesting: (generally) same way mammals in
or near water. Eggs 3-5 white. Incubation
about 25 days.

Voice: Laughing-like & various calls.

Order Gruiformes - (Frigid Columbidae)

Form: Hallux above level of other toes.
Color: Greyish - grey. Foot propels
diving birds. Plumage soft - fur-like.
Body feathers characterize macroscopic
structure - same with apart - basic base, sparsely
marked. Young more or less speckled black &
white.

Distrib.: more or less throughout world but largely
confined Nth & Sth America ^{USA}.
genera confined

Habitat: lakes, reservoirs etc. may also occur.

Habits: adapt as diving. Floating nests
walk awkwardly - fly little generally.

Food: omnivorous - vegetables, flesh.

nesting: floating - save conceal eggs.

Voice: harsh shrill war.

Order Procellariiformes: Albatrosses

Family: Diomedeidae: Albatrosses

Char. Nostils lateral - separated by wide culmen

2 Natural groups: 1 Diomedea 3 Phoebetria
♂ - footed alb. → long tail - cuneate.

Distribution also persistence in bill of primitive
Tubercular characters = sutures - dividing forehead
plate, lower mandible. Oil discharged through
nostrils (mouth). voice unknown (mughs)

Distrib: ♂ ♂ = Temperate & Subantartic
♂ ♂ Other oceans

D. immutabilis (Waved albatross)
Peru, Ecuador, Galapagos I. → Subtropically equatorial

D. albatus (Laysan albatross) → Wds Pacific

D. immutabilis (Laysan albatross)

D. nigripes - Black-footed albatross

also Zonal distribution: ✓✓

most southerly - circum polar. *P. polylepis*,

D. exulans, *D. melanophris* *D. chrysostoma*,

temp. - sub. antarct. *P. fusca*. *D. chrysostoma*

D. bulleri *D. carteri* *D. eximia* (just)

Habits: Generally silent. Very noisy at roosts -
just on top of mound of grass made by flightless

1 Egg: White, shiny, usually reddish pink.
larger end. N/S breeding season for all - Wds Pacific too - Sept - Dec. Young fed on food
regurg. from parent stomach. Imm - nest
feet down replaced by feathers.

In season cases adults molt only in alternate
years. Imm. birds usually stiff plumage for
adults

Order Procellariiformes

Form: Procellariiformes. Shearwaters, Fulmars
Nasal tubes united, opening forward, separated by septum.
Chor: Head toe present. Bill tip decurved strongly
mask seen. Oil reaching to wing, some much so wavy feathers
Distribution: Whole world but mostly
numerous - Southern oceans & land

Habitat: Open all the sea except where
breeding.

Habits: Some migrate to other hemispheres

Nesting: ^{But Fulmars, Antarctic Petrel, Pintail Petrel, Snow Petrel: Nesting Ledges.} Generally holes, burrows, or old rocks etc
white

Gen. 1 egg & long incubation - young born blind. Both sexes incubate, removing - ⁱⁿ - after first 9 days return at night. Young renew - nest
20 weeks. downy - feet. V/B Feeding
young off - ⁱⁿ finally. And in accumulation
while young feeding before leaving

Food: Fish, squid, cephalopods, flying life - scraps. Giant
Petrel a heavier diet, also fish. Small sea-birds.
Voice usually silent - mournful wails at night - and gurgles
Diving: Many will dive short distance for food, usually
after few surface flights - 10' + min. & 100' +

Fulmars: (3 geog. groups - Fisher "the Fulmar" p 7

1. Fulmarus glacialisoides (with 1840) = RAOU 74 Fulmarus
(Procellaria antarctica Stebbins) (F. ill. Synonymy Fisher p 474
I ANTARCTIC FULMAR (Silver Grey Petrel.)
R. 7: Southern Ocean as well as St Helena, NZ, Africa
Breeding around Sub-Antarctic Shetlands, Kerguelan

2. Fulmarus glacialis rodgersii Lesson 1862: PACIFIC FULMAR.
Synonymy Fisher p 710; Breeds Nth Pacific 46°-61°
3. Fulmarus glacialis glacialis (L. 1761): ATLANTIC FULMAR
(Synonymy Fisher p 173) Breeds 48° Nth Atlantic & Pacific
Shearwaters & Petrels (Alexander: 35 Petrels, 18 Shearwaters,
Petrels: Macronectes, Daption, Halocyptes, Thalassarche, Pterodroma,
Procellaria, Pterodroma, Pugodroma, ~~Scaphodroma~~, petrels)

Priors: Pachyptila: 6 sp. Shorn Island - Ant. - S. At. - At. north
& subtrop. Common - flocks. Swift flying (Whole birds -
all land to some extent) ~~not~~ suitable for ch. Lomellinae
on both sides of island.

Order Procellariiformes

Fam. Hydrobatidae (Sulidae)

(Thalassiodromidae)
Small seabirds. slender - long bill,
narrow, almost in single tube opening. toes roticulate
scutellate or webbed. toes webbed. legs often long
feet usually square or forked. most dusky, few grey
some with white line down under surface. Bill with legs
& bill black. Some have short-legged form
grouped with albatrosses - but considered close
(Alexander)

Distrib. North & southern hemisph. Pacific, extending to
Antarctic & Iceland. Gannets include both

Habits: congregate on small islands around gullies -
make burrows or use crevices between stones etc.
Before egg laid both birds - burrow. the male returns
to outside. Egg 1. white, oval - finely, often marked
with red, purple, black spots.
Necking b. - curved - self off, well fed - follows
parents & also when feathers develop.
Nestling - white - on breeding, gets like other albatrosses -
silvery grey.

Flight: After getting water with feet - going from
surface while wing beats - it goes up to top - then
wings alternate. Very flight - buffeting the
air long way round before fluttering. ^{but no} evidence of this

migration Wilson's S. P. (Oceanus), Oceanicus - breed
antartica - migrate to Labrador, Britain

Colours: 1. Mainly or entirely sooty black: *{Halocyptes
Oceanodroma
Pomarine
Nesofregata}*

2. As above but with white rump: *{Hydrobates
Oceanodroma
Oceanis}*

3. Mainly/entirely sooty black
above. Large white below: *{Oceanodroma
Nesofregata,
Fregata}*

4. Partly or entirely grey above;
grey or partly/entirely white below: *{Oceanodroma
Gygis
Pelecanoides}*

All = old Mother Carey's Chickens - Mother Carey =
corruption, water cara - blessed Virgin Mary.

Order Procellariiformes

Form: Pelicanoid-like - diving petrels.

Character: Bill with nostrils separate - open directly up-wards - plane of opening horizontal. No hind toe. Distinctive throat patch. In Southern Hemisphere: biological analogies - of albatross, murrelets (Alcidae) & north.

Distribution: Remarkable a. Only southern hemisphere b. Between 35° S & 55° S range from Sth America through Sth Atlantic & Southern Ocean to Australia & NZ. - In N. S. in some latitudes - Sth Pacific one species - Peruvian - D. P. (*P. garnotii*) Harvey & Cooper's record of Sth America - cold Humboldt current.

Habits: None frequent near coast & surrounding islands. Singly or pairs. Dive for food - fish, crustaceans etc. - rapid flight like flight straight. See their wings under water as if folded. Dive - emerge from water flying - fly through a wave breeding: In burrows, under rocks, ~~the~~ dry & hot. Nocturnal while breeding due to moonlight - dry time voice little - croak & now when breeding.

Breeding range:

P. urinatrix: Common D.P.: Facalau, T. da Cunha, Gough I., Bass Hs., N.Z.

P. georgicus: Georgiou D.P.: Kerg. Hens? Macq?

P. magellana: Magellan D.P.: Mouth of Magellan

P. garnotii: Isle of Sth Amer. coast

S.P. of Germany,

(Frigate birds semi-palms)
Order: Pelecaniformes: Tropic Birds
Petrels, Frigates, etc.: Birds

Fam: Phaethontidae: Tropic Birds (Boobies included)

Char: Bill pointed - central tail feathers elongated.
hind toe very small cutting edges of
mandibles serrated. Tarsus very short.
long tail feathers grown in both sexes & absent in ♀.
in nest.

Distrib: All tropical & sub-tropical seas (Oliver)

Habits: High up - fly over water - catch strong currents
dive - pass over sea roads - rocks - like piers

Feeding: Plunges - to sea from up to 50 feet
for fish, squid. Voice shrill - harsh.

Breed: somewhat gregarious - rookery moderate
islands - same area, soil crevices, cliff, sandy
or tree scrub. Σ 85. I. white, yellowish reddish
red crown, streaked reddish brown - pinkish blue
young thick whitish down.

Incubation: all species; white black, above

Do not often settle on water - floatings, - will elevated
3 ft

P. aethereus. Red-billed: Distinct by red bill - white
tail feathers
west Pacific, Atlantic, Parana
Gulf etc.

P. lepturus: Yellow-billed: S. Atlantic with ^{tail feathers}

P. rubricauda: Red-tailed: Distinct by red tail
feathers
S. Atlantic & Pacific areas,
subtropical

Called Boobies - and, because "comes a making
of the world".

Order: Pelecaniformes

Fam: Pelecanidae - Rekans

Chap.: Bill elongate - strongly hooked nail. - large
gould & pointed. Wings long & a short. Tarsi
reticulate

Distrib: Tropical & temperate regions, - all zoogeog
Divs. - but not temperate of Sth Amer.

Habitat: Fresh water, also streams visiting sea coasts occasionally.
b) The Amazon & Chaco Rivers entirely marine.

Habits: Sociable, ~~savagely~~, flock formation
- flock high in trees.

Feeding may take place at these fresh - to
shallow

Challenger
4/8 Brown - chills esp. only divided from bright
with wings almost - well - may remain
several seconds - usually escape.
tail first

Nesting: colonies - usually on islands - lake,
or sea coast - nests may be hollow,
with any of sticks - or roughly constructed
of sticks, leaves stalks, may be placed on
low bush or tree; alexander chooses
varies according to situation & the
available place.

5980: 2-4. Longish brush white-chalky

Young shorebirds - March 30/31

for over several years & makes at least
one tropical app. even as only to a single
bird each - among others -

Colours

Please white - green - blue

Bombyco - white P. (Nth Am.) *P. erythrocystis*) *Lachnus* *white*
(one cecropiae) *Europe* *black*

Park - be - che's - (astropia)
(Coniferous) Dolomites
2 1/2 x 165' (cristata)
Engg dark green
Ande

Bent. P. A & N.G.

Please see Dray: *Acacia* *phellodendronis*, Malvaceae.

flame or brown

Brown P. (decide what is) Rep. Amer. chibon P.
(~~stagnus~~). pern, Chile

Alpha.

P. rossii Mr. Winkler (H. H. Winkler) -
and in Parkh. (M. A. J. H. S.)

And P. differs from all others in having bare skin
but eye completely surrounded by feathers

Order: Pelecaniformes

Form: Laridae Esocines. Cirratae.

Char. Bill strong, toes webbed - bill naked
toeless, cutting edges of mandibles serrated -
only a middle toe, nearly $\frac{1}{2}$ in. long, downy
middle toe broad & pectinate. Gular pouch
small.

Distrib. Species spread throughout t. of world.
some in temp. reg. Atl. Pacific, Bass Reg.

Habits Feed on fish. dive from up to 10 ft.
swim down under water. have barbs on
nets 90 ft below. Socable flocks.

Breeding: colonies. islands, reeds. nests some
in hollows - ground or sea, others like on
ledge or bush or tree (branches high off ground)
Eggs Temp. sunnits 1. trop. 2000 feet 1, usually 2,
occas. 3. Eggs small oval - yellowish and
white & shiny layer.

Young: Hatched naked - gets down. Runs fast in
but retreats to cover for food.

Food: Insectivorous - eating green growth
when young.

Imm.: Head spp. now as first two.
Downy with white plumage
feathers white, black, brown, grey, white.

Classification: Most special spp. known to us is alba
Gannet applied to whole family by Temmink one in
the family. Gannet = Gannet - Gannet North Atlantic
sp. called Common Gannet = Sula (now Chlidonias)

Breeding: ~~nest~~ (old), nestling, young
Chlidonias (old) under Newfound's old spp.
thus N.Z.

Order: Pelecaniformes

Fam: Phalacrocoracidae: Cormorants.

Character: 4 toes webbed, tarsus, pouch small, bill laterally compressed broad at tips. Tarsus retractile - only toe long, others decreasing regularly. Iris yellow except when eye not as dense as beak, dark, used for shading.

Distribution: all parts of world except central Pacific polynesian chain. Tropical especially hemispheres - Sub-tropics & tropics NIB All commonest of Northern Hem. Black but - south many have white underparts also the common cormorant black - Europe Africa & Asia - white under - Africa &c. Extends to sub-tropic.

Habits: Feeds chiefly on fish, & crustaceans. Dives in surface - may jump if water to do it. Use feet for propulsions. In deep water may use wings, also. Comes down employed - dries off a while and feeds.

Bird Habitat: Dives are extremely noisy. Found mostly coastal way, & freshwater.

Lays eggs

Habits: mostly nocturnal. Board - colonies - on ground - islands, on cliff ledge, in trees. Nest sites nests - litter, otherwise clawed at ground.

Gangs: hope cormorant, 1st yr. olarionary color. Found very vulnerable - this regard

Eggs: 2, 3-4 - elongate pale blue green - under shiny covering. Young hatched naked.

Food: greatly brownish (big bag)

Incubation: most weeks some for part 1 year - nest - bars on wings, planks, back.

Names: cormorant & shag interchangeable except Gilbert where applied to 2 species.

SP. 30 (most - see - etc) -

1. P. carbo : common corm. - ours black color. N. Am., Europe, Asia, Africa, Austral. NZ.

2. P. capillatus Jap. corm. : claimed for corm. - pink Japan.

3. NIB. Nannopterum ^{Nannopterum} _{sarrisi} : flightless corm. : Galapagos ^{birds}.

Wings much reduced - no heel - cannot fly - waddle - or - land - body upright

4. Ceryx cornutus : 3 spp. 3 spp. in N. I. Chotton, Paris

Note 3 genera - Alexander & Peters: Phalacrocorax, Halibutar (4 little cormorants) Nannopterum.

N/B Crest present - Hockland Is. Shags.

Order Pelecaniformes

Fam: Anhingidae: Snake-birds, Anhingas)

4 toes webbed, curved vertebral

Char: Bill straight - no hooked tip. Curved vertebral
articulated & produce curve - neck muscular
metacarpal arch that is evidently straightened
it - transverse fold with bill.

Distrib: Neotropics (South) Indra leg, aust. And (across NZ)
tropical & subtrop. America

Spp: 4 sp. May = 1 sp. Alexander, says; 5 sp.

Habitat: almost exclusively freshwater like a
lagoon / river

Habits: Feed entirely under water. Glides, sometimes
takes fish between mandibles. (Baill & Grant)
often impales fish on its bill - if it propels
by feet

Nests: Stick nests - tree. Eggs. 3-4
greenish-white and cooler.
Collected water-Turkey - America

Order Pelecaniformes

Fam: Fregatidae: Frigate-Birds (Man o'-war Birds)

Char: 4 toe webbed but middle deeply congeneric bill
long - both movable. Strongly hooked at tip. Long pointed
tail. Monogamous
Spp: Peters, May, Alexander, : 5.. range global ponds
the O. (elliptical). These very short - perched.

Distribution: Tropical and subtropical world but 2 spp
in land - man o' war

Habits: most completely aerial water birds - perhaps fall
birds except Laysan. Spend day in air - roost at night in
trees near coast. In some Pacific islands (e.g.
abst. to land like Laysan) - 2 or 3 are largest albatrosses)

Pursue comorants, Sulls, Terns - force them up &
seize fresh caught - sick may break wing if it is produced.
Pursue catches prey before reaching shore. Thus called

Frigate or man o' war birds by early sailors. Do not settle
on water or land

Very docile & tame - harsh grating calls often.

Breed: colonies, tropic island. Nest clumsy stick structure
in bush, rock. Home to protect young from sea species
of flies, will e. island. Egg - 1 - white chick naked
then white down. Young always white head.

Sex Dimorph & large. In P. diff. col. except Accipiter F.B.

Accipiter F.B.: Egretta - Accipiter Id. (Accipiter F.B. = Pandionis
Accipiter F.B.)

E. monachus: Great Frigat BS (West) } 43-44 sp

E. magnificus: magnif. F.B. } (West)

E. acerata: Lesser F.B. } (West)

Order: Ciconiiformes: Herons, Storks^{etc.}, ^{Albatrosses}. /
(Mayr & Amadon arrange order differently)

Fam: Ardeidae: Herons, Egrets, Bitterns.

Char: Bill straight pointed, naked, etc., web between basal web, obsolete at base, some toe - powder down patches - vocal Space base - max clav pectorale.

Distrib: throughout world continent. more
territorial. marsh & woodland. Head retracted onto
shoulders in flight. Colors vary, grey,
white, blackish, brown. Habits capricious -
Nycticorax. Nape streaked plumes - some.

Order Ciconiiformes.

Fam: Cochlearidae : Boat-billed Herons.

Char: Bill very broad, wings shortened.

Supplm: Newton's "Mexican Birds" p. 191
1/3 mayst another place it - Ardeidae & certainly
looks simply like a modified night heron -
but Wetmore claims me up peculiarities in
osteology. so Wedgway has a powder down
breast only 2-3 - Ardeidae - thus he
believes separate family for Cochlearia. See also
Cat. Birds, p. 102, p. 238.

Distrib: Neotropical Mexico - Brazil -

Bolivia - Nth Argentina.

Nothing from S. America.



Order Ciconiiformes

Fam: Balaenicipitidae: Whale-headed Storks

Char: Culmen flattened & groove broad at base of forehead - narrowing towards end - distinct dental hook & powder down patches.
- lower bill - no web at base) inner & outer toe. Species.

(Many placed with Ciconiidae)

Distr: Found only Africa under Aganda, Abyssinia & S. Africa.

Habits: Hoe-shaped bill nearly as broad as long twice as high. Feeds by day, feeds in evening. Stands with bill on breast. In flight head held back like heron (Boat-billed)

Neat: Clattered from dry land.

Eggs 1-2 - dull white chalky, often much stained

Food: Fish, frogs, etc.

Voice: Little if any. Rattle bill like crack (Boat-billed) smay



also called Bog-bird, Hoe-bill

Order: Ciconiiformes

Fam: Scopidae: Hammerheads, Hammerkops

Char: Culmen narrow in depth, dental hook no powder down patches, toes feathered laterally at base joint, mouth, toe - all agree on being a separate

Distr: Entire Africa (S. Africa). Species well dist. - young season. Call: Sharp & querulous. Name derived from appearance of bird when rest, bill much from head. Figures: Legend: Stones below molt. barbs of body web. Shaggy full - note st. dentate foot

Char: Name derived from appearance of bird when rest, bill much from head. Figures: Legend: Stones below molt. barbs of body web. Shaggy full - note st. dentate foot Flight web not above wing both like heron. Behaviour: nocturnal. Owl-like flight

Neat: Brownish - tail mostly black - outside decorated with various markings. Small brownish hole will edges pleated with mud Chapman records 4 months to build nest. Eggs 3-6 white



Order: Ciconiiformes

Family: Ciconiidae : Storks, Tabirias

(Wood Ibis)

Char: Her stork elevated from other birds. NO powder -
zone patches. Bill NOT hooked at tip. Both
legs webbed at base. No distinction on middle
crown. Stork is in fly with neck outstretched,
nooting slightly - not folded like heron.

Sp.: range: 17° N. - 30° S. - some at least

Distributions: Pal. Ethiop. Nearct. Neotrop. and Ind.

Char: Wedge variety form. wide spread bills gen
long & straight - but compound - upturned at tip in
Mysticra Japonica Japonica, curved in *Ibis* - Wood Ibis
& *Tabiria*, showing gap - *Xenorhynchus* - open
bill of *Ethiopis*.

Generally solitairy, shy. But some occur in large
flocks inland waters, streams etc.

Nesting: Walks steadily - clatter bills

Nesting: Gen. Stork nests - trees, cliff, ledges, etc.
Some nest in colonies. Egg. 3-6 white
shabby. Size is vary.

Habitat: Several types - both wet & dry areas
often same nestings show both. Some are scavenger
e.g. Marabou nest lake now a

"Marabou" *Leptoptilos crumeniferus* (Linn) bare hair
web like vulture sometimes long & pointed sometime
frayed with apex as "aborn down" - bristle
feathers - single but coarse. Hind toe
white stork *Ciconia ciconia* Europe Africa

Tabiria: 1 *Tabiria mysticra* (Richt) Sth Mexico through E. Brazil
Stands 4-5 ft. Bill slightly upturned black
neck bare black tail long, red & bright red.
2 *(Mysticra americana* L.) Thicker called tabiria
appeared above first by Newton Campbell
Nuf. High & Hudson but it is old name
the wood ibis.

2 *Xenorhynchus variatus*: Tabiria: 2nd region
- N.G. Amer. (middlebellied) ^{also called jamaica;}
Mysticra americana L. 3rd region tail
yellow. white black necked head - black
called leuconotus w/ white & black
back becomes slightly

Adjutorius: *Leptoptilus dubius* 2nd region -
red neck & neck purple -
by bill - black web.



Order Ciconiiformes

Family Threskiornithidae: Ibis, Spoonbills

Char: Bill much de curved & flattened & spoon-shape.

Distrib: Ethiopia, Pol., Neart. Neotrop., Ind., Austral. (S.E.A.)
Hot & temp. regions - both hemispheres

(Malabar - Spoonbill Europe, Africa, Asia ocellata only)
(28 spp. altogte - may.)

Habitat: Open woods, marshland, lake, etc.

habits: Bushy groups - noisy birds - colonies -

both feed & sleep in reed beds.

Scarlet Ibis: Guara rubra (L.) Trop. Sth Amer. - casuar
& West Indies, & cent. America

Order Ciconiiformes

May subs = 4th order

Family Phoenicopteridae: Flamingos

Char: Very long slender legs, long neck (18-19 cervical vert.)
bill elongated - middle - both mandibles with fleshy
lateral lobes - fleshy tongue thick. Hind toe small or
absent - fore-toes webbed (inset) rudimentary,
cooperative, young, much development of down & downy

N/B Swims freely when necessary (Brodt & Grant)

Distrib: Pol., Ethiopia, Neotropical (occas. Arctic?)
Spp. 6 may. 3 genera Phoenicoparrus, Phoenicorax
mainly tropical birds. Phoenicopterus

In sea: salt & brackish water, fresh water.

Feds - water

Habits: very gregarious, feeds with bill hanging
inverted, head partly or wholly immersed

Nest: mud woven? above water level (P. nubifer)
2 white eggs

Voice: Honk like goose.

Order: ANSERIFORMES: Screamers, Ducks, Geese & Swans. 19

Fam: Anhimidae : Screamers

Char: Bill gallinaceous - predominantly webbed - front toes, 2 spurs on each wing - anterior one larger, Horn on cere;

Distrib: Neotrop. region only.

Spp - 3.

Habitat: Two ps. Lagoon - by nature woods

Habits: Lays eggs. Food: water plants

Nest - reddish - eggs - can bridge nostrils - buffy white - 4-5.

Order: ANSERIFORMES: Ducks

Fam: Anatidae: Ducks, Geese & Swans.

Char: Anterior web fully webbed - rear - no web - long flattened bill - rear claws flattened - sometimes hooked point. It's with large special penis. Monogamous nest though eggs - never show downy buff general white pure white. Young down covered - able to swim at once.

Distribution: Far by farly common & widespread.

Genus 1. Geese & Swans: Branta, Anser, Cygnus, Oressochen

2. Whistling (Tree) Ducks: Dendrocygna

3. Shelducks: Lophonetta, Tadorna, Alopochen, Nettapus, Cyanocephala, Chloephaga, Tachyeres

4. Riverducks: Anas, Amazonetta, Mactacryas, Rhodonessa, Stictonetta

5. Pochards: Netta, Aythya

6. Perching ducks: Amazonetta, Chenonetta, Hix, Nettapus, Sarkidiornis, Cairina, Plectropterus, ~~Anseranas~~

7. Sea Ducks: Somateria, Camptorhynchus, Melanitta, Histrionicus, Clangula, Bucephala, Mergus.

8. Stiff-tailed Ducks: Oxyura, Sibirura, Thalassornis, Heteronetta.

9. Torrent Duck: Merganetta.

Anserini: Swans, Geese & Swans differ only in - large size, shorter legs, longer necks, more vertebrae). Sexes similar, ♀ larger, voice, no metallic colours, young, young yellowish pinkish feathers, supraloral display simple, seem to pass for life, usually on body, 3rd year sex maturity early, annual molt - no edeps plumes - molt mainly on head - graze for vegetable food.

Closely built - family life - a monogamous next season.

Coscoroba swan: Coscoroba coscoroba white, swan-like but long big bill & large feet like whootie - duck. Young like a cygnet. Feeds to be cunk between Swan Goose & a whistling duck.

West: Sits America a

Dendrocygnum: Whistling ducks: little brown young - mixed feathers. Both sexes same color - sexes alike, no metallic color, no red like posterior & display - vegetable food - nest usually just across - holes - trees. Elder duck - blue - black - grey - white - India, Africa & sea around it - Australia.

Tadorna: Shelducks. Not far from river ducks. Superficially more slender & give no - don't bill well. Both sexes alike or diff., voice, & & very diff., noisy & broken, and shrill. Eggs small & white, some species have dove-like but to large Cereopsis see p. 13.

Anasini: River Ducks. surface-feeding ducks - smaller, pointed tail, waddling walk eggs, short & pointed 2 months per annum. Some sex dimorph. Most fresh water some go to saltwater - feed in shallow water ~~but~~ "upending" Stratophorus follows on bottom - requires of elaboration

Blue Duck N.Z. aberrant

Pink-eared Duck

Pink-headed Duck

Fr. West

Aythya: Pochards. Fresh water diving ducks - sh. heavy body - display diff

Cairina: Pekin Ducks. Peacock - group more like - like the others, most nest in tree hole. - forest ducks. Young able to climb. Birds few used to bathe in lake, Lemnetta too. Muscovy Duck Cairina moschata here.

Merganser: sea ducks are great divers, spend much time at sea - bill strong hooked & nail not - toes, culverts, rocks etc. - gen silent

Oxyrinchi: Giff-Tailed Ducks. No apparent connection with other, all in saltwater less salt water with rock nests. Very long & broad webbed feet.

Merganettini

Torrent Ducks: From endes esp. small duck, narrow bill spots embossed of wing - live along rapids mountain streams - dive little known Merganettini acuta.

Order Falconiformes Vultures, Hawks, Falcons.

Fam: Cathartidae: New World Vultures.

Char: Ocular wattle red - legs not prehensile
feathers on crown - no true feathers on head.
Nostrils perforated : nostrils open, not
distal

Distib: Tropical Amer & S. Amer & S. Africa.

5 sp. - Helmays.

Char - claws proportionately small
& blunt. - bill strong, hooked & plumbeous.

Vultur gryphus L. Condor

Sarcogyps popa (L.) King Vulture

Cathartes aura : Turkey Vulture.

22 order Falconiformes:
Fam: Sagittariidae: Secretarybirds

Char: heavy leg, short toes, relaxo., multiple
exterior head. Sagittarius serpentarius

Distr: Steppe & Ethiopia. Sp.

Habitat: Open country

Hab: Lives hard stamp with foot - bill gristle
large under-widely protected

Nest: Large - stick, - w/ brush & tree

Egg: 2-3 white, st. 1.5. 8 days.
Food: like other reptiles, large insects
- young bird eggs.

Order Falconiformes

Family: Accipitridae: Hawks, Old World Vultures, Harriers

Vultures. Eagle like - naked at least on part of head

Distr.: Polynesia, India, Africa

Char.: Yellow light, common feathers

long legs, long tail, naked head, claws sharp.
Eggs white & flowers inside the incision

Griphon Vulture: *Gypaetus barbatus*:

Spain, Greece, etc., Africa
very large, blackish - reddish



Black Vulture: *Gypaetus monachus*

east

like a vulture but
black head, serrated

Bearded Vulture or Hammerhead: *Gypaetus barbatus*

Rough grey like the Black Vult.

Note two - 1. of black bare skin
below bill



Eagle: hooked bill, - soaring, heads white
larger than vulture, most pointed on prey
some coloration

note number of eggs - e.g. Aquila - Fish-eagle
like few broken but many

Bald Eagle with name. *Haliaeetus leucocephalus*

National emblem - year 1782. white head, black

monkey-eating eagle *Pithecopus jeffreyi*

Eagle: super-natural - eagle - monkey-eating eagle
high crooked bill - feeds apparently on monkeys
white, grey, brown, mottled

Buzzards, Sparrows,

24

Hawks back & wounded wing. W-g laid
- has a band on - plus

Kite. injured wing. Abnormal flight

^{Harris}
~~Falco~~ swift skin wing

^{Eagle}
~~Falco~~ Robins swift too. just

Order Falconiformes

Fam. Pandionidae Ospreys

Characteristics: Shallow talons, reversible toes w/ sharp claws.
Feet straddled with strong grip.
Whole body & downy feathers, feathered.

Habitat: Whole of Old & New World, Found everywhere.
Other parts - like Australia.

Characteristics: Max. Prosternon says plunge head downward to water, etc., etc.; Sternum says flaps, etc., etc. F

Food: Fish, frogs, water & etc.

Flight: Very large - seen on ground.

26 Order: Falconiformes

Fam: Falconidae: Falcons, Caracaras

Falcons: Not altogether clear cut some intermediate

Typical Falcon: pointed wings, notched tail.

Falconet (Pygmy or French Falcon,) Alcippeis
Indian Region (Tropical area.)

Feed mostly insects, small birds -
purple rodent.

W.

Caracara (Caracara) mesocaracara
of Nth Amer. ^{Milvus?} _{then}
The Falcon like bird - found,
Carrion eater - but at nesting ^{places}
gregarious, several seen
Nest : Tree - nest lined with
wool - eggs 2 or 3
and blotched.



28 Order Galliformes. Negapodidae,
Curaçao's
Pheasants
Hoatzins

Fam: Negapodiidae 182-176 sp. s.

Chas all ^{Haben. & w. well oth.} ~~gl~~ with legs - move
raised by one or ~ one pair of hind
young hatched fully feathered without
downy downy present - able to fly almost
from birth. Habits like of other birds.

First Isd of Socorro Nth to Philipp. &
Sth to the S. East to Nivafon west
to Melchor Id. He a 15g,

Negapodius Widespread through
most Pacific Isds. 2 d. & aust eggs.
Breast bare simple, thin plume money
white & yellow.

Lophura Moluccas

Lophura Bust

allectura Bust

alcyone - NG & Stks.

Argusianus ?

Order Galliformes.

29

Fam: Cracidae: Curassows, Guans
Chachalaca

Char: all gland tipped, nest穴 - tree
or ground esp. white, no whitish external
diffs - habits similar except

curassows & Crax spp.

Distr: cent & s. America. (see below)

char: Fowler's long-tailed, (some) crested heads.
many species, arboreal, lives often above
some pampas
Habitat: in open &?

Food: fruit

that coconuts, sheath

chachalaca: (Details p.) mostly Nth Am.
- name per - call "chachalaca"

Colours: Various. Young green back, red head

Faisan Real: broad crest & co., very red
Some show lamellae, iridescency

Guans: interesting see page if not the same
Distr: cent & S. America

North-southern - seems more slender

30 Order Galliformes

Fam: Tetraonidae: Grouse

Char: tail ex above level, other wise
Nostrils wholly, & no air holes in bill,
nathured or only bare feathers & only
upper half plumed feathers. side of bill
bare - bare
All species on bare site. sex

Distr Nth Hemisphere

Black grouse. Black cock (12-18) ♀= grey hen

Gruidae. Red Grouse. more found of Engls

Phasianidae Pheasant & Peacock.

Capercaillie Pheasantine - red - E Asia
- coniferous forests

Poule Chukar

Large Hens

Order Galliformes

31

Fam.: Phasianidae quails, Pheasants, Peacocks.

Char: Nostals never hidden by feathers.
Tarsus partly or entirely naked - often covered
with spurs. Hallux present.

Distr: Almost cosmopolitan

Genus: Red jungle - many migrants;

Some American form see in - this - section

Pheasant: ♂ very gaudy & in plumage longer
than 10. most genera (Phasianus)

Asia, Malaysia, Europe. See. Partridges.

Quail: p. Africa, southern (Partridge-like)

Partridge See group. Europe breeding is
not so large.

Francolinus: Family parties - localities -
near water - some stay afield, some field.
A. aft. Run rapidly. Fly little,
eat plants, seeds, roots - like the
nest like Partridge (6-14 eggs) -
buff spottet. See. Grouse &
See. Quail

32 Order Galliformes

Fam: Numididae: Guineafowl

Char: Crested or helmeted. Black spotted white. Pore of wattles no spur. Hallux present

Strewn on domesticated bird

Dist: Africa, Madagaskar

Hab: May be gregarious all day

Order GalliformesFam: Meleagrididae: Turkeys

Char: Strg head with naked carunculated
♂ t. w. l. spurs

Distr: Nth. Amer. Mexico, Guatemala,
Guatemala, Central America.

Habits: Board. of woodland flock non-
breeding in mtns. Otherwise like above &
seen.

34 Order Gaviiformes

Fam: Opisthocomidae: Hoatzins

Char: Neck very long, web very small
monocle crop. Young tail naked
pollex index digit provided with claws
naked & blunt. Also able to run & climb
Dist skin - gular - throat

Neat Stick, one & white

N/B Crop & wing - w - S, 2 in fact.
for food habitat - - - - - , will be pemphire -
blow, animal -

Drawn by -

See Tropical Wild life - Beke Hartley Home.
- Rainfish "sunana"

AV - Oct 1977

Order : Graciformes : Cranes, Railks
etc. 25

Fam : Mesoenatidae : Roostelos, Monias.

See S.N.H. p 662.

Mesites anomalis : Nosplana.

Variously designated originally.

N/B Check refs. in other checked
books and see also

36 Order : Graviformes.

Fam: Ternicidae : Bustard. Gulls.
(Hemipodes)

Char: ~~wings~~ ~~absent~~ = young birds
covered with down able to run soon after
hatching

N/B ♀ larger, plumage brighter, Brunette
plumage. Bill like saltiniæ. Gills weaker.

Hab. 2nd. Reg, through And. Reg.
Bills esp. reg. with Anaps.

Nest: Shallow nest - 2 eggs - dotted.

Order Gruiformes.

Fam : Pedionomidae Plain-Wandersers

char : Tellus present

Notable : Tellus present, wing metapoxie,
No left coracoid, large egg pyriform
- sep from Turners

Dist : Aust

38 Order: Grusiformes

Form: Gruidae: Cranes

Chas. Irenum grooved, receive convolution
of trachea bill may be short - usually
grooved on lower mandible. Fly with
neck out stretched, crouping voice
inognous, some singing, performing
stately ceremonial dances - spring.

Diet: Palestine, Ethiopia, etc.
Rep. - anch.

nest: in get or above water. Egg 1-2. flesh

Spotted

Habitat: marshes, swamps, plain, fields.

Food: meat & vegetables

Order: Gralliformes.

including hen, bantam bird

Family: Aramidae: Limpkins
Illustr S.N.H. #665. (Colvill)

Notes: 2-feathered rump - long & tail-like long whiskers, bill long & crooked wings & tail long.

Distr: Veracruz. (Sp. name)

Habitat: swamps, bottom stream.

Food: molluscs, small annelids etc.

Nest: set among reeds. " eggs, N/B thicker ends but like nail, long 10-12 white not spotted like nail.

Habit: sooty or sandy sandy - they fly with legs down at gliding wing, but

Order: Gruiformes

Family: Psophiidae: Trumpeters

char: Bill short, pointed, thick.

Tibia very long, legs short - No. 110.
long wingptd. neck & immovable, long
- males, extending outside abdomen
recently, 5 years.

Diet (35pmay) consists of Neobry. Shrimps.

Habitat Tropical forest

Habits: Fly in flocks, seldom fly, run swiftly.

Voice deep, ventriloquist - long warble.

Locally known kept by Brazil natives

well take to water. (N.H.)

Nest - eggs - 2 - light colours



41

Order Gruiformes.

Family Rallidae: Rails, Coots, Gallinules

Ches Bill various shapes long - true rails,
short - crakes, deep in gallinules Toes
slender & long, sometimes webbed & scalloped
Talons always short - of " "

Eggs few numerous - cream colored
Young - down covered. Able to run or swim -
are adapted to swamp life so some adjusted
to trees & vines. S. Wings short but some
migrate N.B. so a flightless.
It is non-migratory

Nicobar Pigeon: Gallinules eggs - two per
nest. Food - wide variety of animal food & plant
Nests under bushes etc. Flightless, confined
to islands

Horned Coot Fulica cornuta: very rare species known 1947
(Chile & Bolivia). has extraordinarily wattle - builds
pile of stones on which to place nest - see Index paper &
Giant Coot F. gigantea also have wattle - same
paper

N.B. See pp 151-2 Vol IV Hall. Gen. Mon. Rec. names
shown to be composite by some.

42. Order Gruiformes.

Fam: Heliornithidae: Sun-grebes.
(Fin-feet) S. NH 570

char: plumage close-set - gen appearance; living rail - toes scalloped lateral webs.
Habits of cormorant or megansar - ab easily

sp. 3 imm.

Dist: Ednaf 1, Neolag. 1, And. 1

Habitat: den at wooded stream -

Habits: swim rather well

Neolag. (peron sp) flat pale grayish. 12, blue over water.

B

Order : Graiformes

Fam: Rhynochetidae: Kagu

Chor Bill broad like length of bill
22 inch. & all orange-red
Nearly all its down better

Hab: confined to New Caledonia. It may

- - - - - . Rocky ravines - sea - water.

Hab: Indigo - living on land p
shows great power, the spread wings

etc - - - - - , crosses river, crosses dry leave,
- - - - - may hold wing tip & foot - - - - -

Food Molluscs, etc - - - - -

Type Specimen NH - p669

44. Order: Gruiformes

Fam: Eurypygidae. Sun-bitterns.

Ches. crests more long. Bill like nail
- eggs like Scolopax imberbis

Nestling feathers like Loren's coot's
Spp. + ways. (in. loc. v. v. v.)

Bill crane-like

Distr Neotropical

Habitat: Woods + wood-pastures

Nes: said to be streaks gross + red -
eggs reddish buff. Brown Ann. N.H.

Habits: like. Keen exenter. foot + bill down -
spreading wing etc.

N/B Apparently a very beautiful bird - bands;
chestnut. red grey white - blackish markings
on wings. Name: Not given to sunlight
+ nest like a bottle.

Order: Gruiformes

75

Family: Cariamidae Cariamidae
Serious.

Character: Bill short, neck long, legs long
- toes sp. much webbed.

Dish Sh. birds.

Incubation 22-25 days - 2 eggs - 100-120 mm.

Habitat Forest - trees.

Habitat Twigs - trees - eggs white, naked.

Sometimes called orioles or woodpeckers.
- - - - -

46 Order Gruiformes

Form: Otididae. Bustards

char corac present Bill rather flattened, obtuse,
Nest depression under leaf or grass,

Eggs double spotted Nesting downy

able to run two days after birth Andined
pene, NO keelled ground dwellers. ^{and pink}

Distr: Pol, Ethioz., Afr st. 23 spp (many)

Habitat Open & bare

46

Order: Charadriiformes: Shore birds
Gulls
Auks.

Fam: Iacanidae: Jacons

48 Order Charadriiformes

Fam: Rosstratulidae: Painted Snipe

Order: Charadriiformes

49

Fam: Haematopodidae: Aythya

50 Order: Charadriiformes

Fam: Charadriidae. Plovers, Turnstones
Surfbirds.

~~5*~~ Order : Charadriiforme

Fam: Scalopacidae: Snipe Woodcock,
Sandpipers.



54 Order Charadriiformes

Fam: Recurvirostridae: Avocets,
Stilts.

55

Order Charadriiformes

Fam: Phalaropodidae: Phalarope

56 Order Charadriiformes

Fam: Dromaididae Cirr. Powers

char. Egg white. black & white Bill like bird - thick heavy bill, toes partly webbed - nests in burrows.

Piel. feet not

Habitat: sea weed

Habits Fly with neck & legs out - rockworts
Feet webbed - snakes. (and land

N/B Nest: In burrow - son's - some fine
feathers - egg, white numerous

Ind. r. Charadriiformes

57

Fam: Burhinidae Thick-knees

58 Order: Charadriiformes

Fam: Glaucidae: Pratincoles, Courser

Order: Thymoeridae Charadriiformes 59

Family: Thymoeridae: Seed. Some
char. like some sandpiper - feet not webbed,
hind toe present. tail very retic. front &
back - plumage like some birds. flight
like plover. vocal - up-call - wing
- eggs pale yellowish - nestings
downy. Illust. & NH 683.

Distr. Sh Amur. Penn to Balkans &c.

Habitat: usually sit on dry

Habits run well, fly like plover.

60 Order: Charadriiformes:

Fam: Chionidiidae: Sheath bills.

char Bill with complex thumbtacks

Feet not webbed (only membrane between toes) curved - no - tail - 0.00.
Habits land lot about. Nests - holes
0. bet 5 & such eggs like nestlings.

2 sp: may

beak Exten. south Amer. & Isld.,
sub Atlantic - Magellan & n. strait.

Order: Charadriiformes.

61

Fam: Stercorariidae. 26 species.

Charr. Food toes webbed. Young downy.

sharp & recurved - like crooked bills - cere orange sharp claws - stout
toe webbed - toe webbed - long toes webbed - have short bills, beaks wide (longer), long, wedge
shaped etc., - webbed & bare, central toe protractile

Distr. mainly sub-tropical. alone, seacoast

Habits Bird-gulls - eat small mammals & insects
ate a long time - & small ones & larvae
for others food never dry - Flesh gull-like
powerful. Bill of gulls & flesh very similar

Nest. A - shaped hollow lined with grass or
wads. Eggs 2-3 spotted brown purple.

Name: Skua from all Tongas - been used

For hunting. Sexes alike.

Varied w. color variable, not very consistent.
4 species breed in the arctic region & Great Slave Lakes.
- Etch by race. The 3 smaller species - in grade 5
then turn right due to northward winds while
the Skua we see, turn p. to p. of both hemispheres
during winter. Coast of S. Amer. S. Afr. Great Lakes
Skua. - Lesser in size than others - white

Catharacta SKUA SKUG Brunn. - Great SKUG Nth Atlantic &
ice seas

... " ... lombergi

Skua s. atlanticus -
southern SKUG Sthen arct.

... MacCormicki intergrades Skua

Petrels bills & subely of C.S.S. Endemic sea N.Z. trop.
: black = black white = white white black

Stercorarius pomarinus : Common Gull & white

" paradiseus Parasitic -

part
white
black
white
two range
white

" longicaudus long-tailed -

62 Order: Charadriiformes.

Family: Laridae: Gulls, Terns

63

Order: Charadriiformes

(scissors bill)

Fam: Rynchopidae - Skimmers

char: movable nostrils on present. long & toward. wings longer. will sit slightly forward. feet so small also deeply webbed.

Dist. Temp. & trop regions. Nth & Sth Amer.

- trop. Africa. Indian & Pacific (Acus & canada)

Habit: flies over water with lower bill just submersed. long & open. - like wings.

6th Order: Charadriiformes

Family: Alcidae: Skuas & Shags
Chas Signature charadriiformes -
diving habits. confined to salt water -
short legs. webbed feet. anterior toe
always so. post. toes webbed. tail strong &
deeply forked. coloration: sometimes
darker above & lighter below. HBZ in the same way.
parts of bill shed after each breeding season -
Others by migration. eggs. large 1-2.
Dist: NH region & north寒帶.

British: Alca spp

Razorbill,

A. tenuirostris



Little auk



Gull-billed



Puffin

see

Plautes:

extinct

Alca

Fulch

Uria

Murre

Ale

Norfolk

Spheniscopus

Gull-billed

Brachyramphus

Murrelet

Eudon

" "

Phalaromphus

Inklet

other

" "

Fratercula

Puffin

65

Order: Colymbiformes Sand-grouse
Pigeons
Doves.

Family: Saccophagidae: Sand-grouse
overperched
doe's really terrestrial ~~but before~~ ~~the~~ ~~of~~
~~cocks~~ ~~six hours~~. Eggs rounded
both ends. ~~was~~ ~~speckled~~
bottom ~~in white~~ ~~or black~~. Dents both in cups
when game birds ~~at~~ ~~fallen~~ ~~scattered~~ ~~dropped~~ ~~eggs~~.

Distribution: Pol - Eur. + Asia + Ethioz.

Habitat: Steppe + desert.

Flight rapid

Nest simple on ground.



Habits: Breeds - great numbers - in steppe also at
desert margins outside breeding season.

Appearance: Light col. - pale grey - like pigeon
head & wing pointed wings: short.

Tripping, ~~tripping~~, ~~tripping~~.

166 Order Columbiformes:

Family: Raphidiore: Dodo s, Solitaires
coucals?

3 extant species: Dodo? Mauritius
Dodo? Réunion? & Solitaire? of
Rodriguez

Dodo ~~large~~ large pigeon like bird w/ gape,
~~the~~ Turkey - abraded bill & wings.
flightless. Large bill ending in hook.
Plumage dark. Uncommon ~~unusually~~
17th C.

Believed to inhabit forest -,
swallowable, - large white egg or gape - -

Solitaire: Large dove with slatey
- neck - long, loose. Large white egg

Order Columbiformes

67

Fam columbidae: Pigeons, Doves
that Colca absent or small. Pharynx,
well developed esp. bloom on feathers,
- generally strong & gizzard. Nests - cane-
tubes, ground or light open structure - lined
eggs white (yellow in ~~nesting form~~), nearly
always 2, two in cl - 2-1. Nestly
all air terrestrial - few rock banks - or terrestrial

Distr.: - Cosmopolitan - not Arctic, Subarctic
- Antarctic. 287 egg diag.

red breasted
Tooth-billed Pigeon or Samoan Pigeon. *Didunculus*
Strigirostris
Dist Samoan Islands (*Uppi adavaii*)

Powerful curved owl-like or rye bill
feet skin over eye red - bleed
before peeling much or not





Order: Psittaciformes. Lories
Parrots
Lories.

Fam: Psittacidae: Lories Parrot Macaws &
has feet versus zygodactyl by reversion
of 4th toe. No coclea - gall bladder - gen absent.

Dist Vestigialae: NZ ^{eg.} only,
Lorikeet front leg.

Prob. troph. mimic.

70

Order: Cuculiformes : Plant-eaters 71

Cuckoos
Road-runners
Ninjas

Fam: Mesophagidae: Teracos, Turacos.
char. Feet semi-zygodactyle in 4 digits only.
Toe capable of being turned back or forward.
Tarsus present ~~Naevus~~ ~~naevus~~
~~most webbed, long & weak.~~ Twisted either & bill
2 groups. Claws very strong & sharp.

Dist: Conf. to Ethiopia regni.

Habitat: Woodlands & forest.

N/B berries number 1 way.

Gold, pigment, turacos contain,
copper & IWH 706. B.M.C. XIX 435

Habits: Known one. not parasitic
cooperative birds, -

and ...

72 Order: Cuculiformes

Fam: Cuculidae. Cuckoos. Food: nectar, fruits
does some nesting; feet zygodactyl,
cosmopolitan.

Roadrunner: Geococcyx

disj.: Cent. America

Dry areas - runs at great speed - conceal
leaves, bushes - catches insects



^ may be
solitaires
(♂) singing
with -
is often in
a - unit -

Anis motophaga

disj: cent. America + Sth Amer.

11. Order : Strigiformes - Owls
N/B See notes. Vol V our area.

Fam: Tytonidae: Barn Owl
(+ the Owlets will resemble forms)
Char Primaries II (first much reduced)
Inner toe as long as middle claw, middle
talon weak talon discs broad & short -
Nearly cosmopolitan
Eyes of older specimens ^{sharper} - ie diffently shaped

Distr: Absent from NZ, Hawaii & cold regions

Order: Strigiformes
NB See Mathews Vol V on most forms.

Fam: Strigidae. Ovis
(the others are rarerable)

Char Inner toe much shorter than middle toe - claw of latter not pectinate
Facial disks more or less round

Distr Absent only from Polynesia

16 Order: Caprimulgiformes Oil birds
Go alround.
Protruding mouths
Food.

Form: Steatornis chalcopterus Oil bird's
guacharo.

Char. Resemble podargi podargidae but
phenax soft bill like coraciid.
Eggs, white, incubation 28 days.

Distr.: W. Amer. Extends to Peru

Birds killed by natives for oil from body,
for drugs.

Order: Scutigeromorphes

Fam: Podorgidae Frognathidae

77

78 Order: Caprimulgiformes

Fam: Nyctibiidae; Pteropodidae

Chor: Nightjar Lkbr.

Dist: Trop. America incl. Jamaica

Order Caprimulgiformes

Fam: Aegothelidae: Owl frogmouths

77

80 Order: Caprimulgiformes

Family: Goat Suckers.

Order: Apodiformes: Swifts, Hummingbirds ⁸¹

Fam: Apodidae: Swifts

82 Order: Coliiformes: Colies.
Apodiformes.

Form: Hemiproctidie (Wing long & tips
deeply forked tail ^(Tree Swifts))

has deeply down feathers on plant
elongated more or less o, superciliary
stripes on sides. Sexes diff (no rufous
on ♀?) Nest half dome, both speckled
brownish - egg.



VIB Nest first branch
Egg glued with calora
to nest Bluff S W Pacific //
First except one in all P 78

Diet:

Insects, insects.

Order: ApodiformesFamily: Trochilidae Hummers

have long heart orange wavy tube extending
far out separates into 2 external lateral sheets
Eggs always white, ^{2-3 in. long} contain, in nest
flight strong by rapid ^{w.} wing-beats, no pigment
hence greenish in feathers, ^{black} & red/orange flight

Distr: Extent to Sth America

Feeds insects & nectar

Habits: carry out pollen like "humming"

84 Order: Coliiformes: Colreis

Form: Coliiforme Colreis (Mousebirds)

Char.: No coeca all toe directed forward
- perot perhaps ventrally near cap -
- br. ab. legs & feet long tails very
- long

Ref: Ethiopie

Habitat Forest flight bombers

Habits: climbs with whole metatarsal,
opposite to branch

Form: Trogonidae. Trog...
the Bill short, strong. Mandibles
separated & strong in Nostrils &
base of mandible - covered with
teeth ^{here} ~~unique to arrangement~~ ^{V/V}. ~~of~~ ^{W/W} ~~arrangement~~ ^{W/W}. ~~of~~ ^{W/W} ~~arrangement~~ ^{W/W}
toothless & second ~~be~~ ^{be} ~~weak~~ ^{weak}.

Habit: Tropical areas of Central America,
Indonesia & Southern Asia.

Habitat: Forests.

Habit: Small, to fly & - power flight
exposed short teeth.

Food Forest, insects.

Physical prob. most beautiful

V/B Trogons ancient form
once occurring in Palaeocene
as shown by fossil. CNH.443

86 Order : Coraciiformes: Kingfishers

Hoopsies
Wood-hoopoes.
Cuckoo-shrikes
Gard-rallers.
Bee-eaters
Rackrs.
Hornbills
Todies
Motmots.

Fam: Alcedinidae: Kingfishers

Order - Coraciiformes

87

Family: Todidae: Toadies.

Character: Bill long, flattened, small keropishe-like birds. Bill mainly curved.

Color: Bright green above, whitish below, bright red throat.

Diet: confined to break entiles washable.

Habit: Flycatchers, snapping up victims as they do so.

Nesting: Resemble the shrike by tunneling white egg.

88 Order: Coraciiformes

FORM: Downy & bare

Chow feet emarginate (unusual bird)
differs from Tochel by greater size (relatively weaker) long tail, distinctly decurved bill (a - & per. tail colours = olive-green & rusty (niveously red on white like Tochel - Padgram)

Distr Conf to cent. & Sth America

Habitat: Forest

Habits Solitary - such long periods.

Food Insects, small vertebrates

Nest: Excavate hole - white eggs.

"Not nests with racquet-shaped
nestling, here from 2 hrs. is
produced the shape by nibbling
of the wood, C. W. H. 380.

Order: Coraciiformes

89

Fam: Meropidae : Bee eaters

90 Order: Coraciiformes

Fam: Coraciidae; Rollers

order: Coraciiformes

91

Fam: Brachypteracidae: Ground-rollers.

92. Order Ceraciformes

Fam: Leptocephalidae: eels - rollers

Order: Coraciiformes

73

~~Procellariiformes~~.

Fam: Upuceridae.

the long tail hornbill like - structure
marked 2nd toe out past toe - - -

Dist. Other part from Brazil to Japan, ^{Ethiop} (Africa),
India, S.Eq., as far as Borneo.

Habitat: On scrub, open places, old buildings etc

Habit: Feed, mainly on insects

Call Hoop - Hoop

Nest: holes, crevices in limestone walls etc
- normally in nest material eggs 5 & 6 -
whiteish - pale - yellowish

91 Order: Coraciiformes

Form: Phoeniculidae ("bird-buzzards")
long tail, search very broad &
food: not much so far as I can find.

size: Sturnojs.

color: blue black green
red grey black



Fam. Bucerotidae: for. Bill.
thin pointed beak.

Char. Bill very large cellular bony structure.

- casque or helmet - some spp
- stiletto unpaired maxilla

shows excretae or aphids

Eggs white, w. mottled, naked &

helpless, mandible - somewhat hooked.

Dist. Africa, S. Amer Reg.

Habitat: Jungle forest, near water

Habit: feeds - fish, fruit insect etc.

or casts up wings, eggshell - & few
molt & young? (N.H. 59°)

Nesting: junction of 2 branches serve as
nest, fence posts, rocks, bluffs, cliffs etc.

- & prob. walls here & there - white eggs

& emerge with yolk. It feeds her

through hole

96 Order: Piciformes. Tacomas
Barbets
Toucans
Woodpeckers
Puffbirds

Fam: Galbulidae: Galbulidae

Gen: Zygodactylus long toes tail
- bee-eater like & Zygodelus, metallic
plumage, long - pointed tail

Dist: Neotrop. (ent. with amherd)

Habitat: Forest near water

Breeding: holes - small bushes, possibly
old stumps - egg - white, rounded

Perch - insects. often -
caught in air - flies out from
wings - flaps them.

Fam: Bucconidae. Puffbird

char: Tygodaetylos, short strong bill

Var Galbulidae (p 96), bill looks more or less

at tip for general purpose arboreal
Bill with red or yellow base - holes. Puff up

Dist Black belly. & rump. ^{white} white. Central + S. America

Habitat: Wooded area. jungle forest



98 Order Piciformes

Form: Capital idea. Barbed.

Ch. Difficult to delineate. Plumage usually
gaudy, not all forest birds, very
large bill: In all rather
heavily built birds - large stout bill.
Nest - hollow - may make own hollow -
Rare? N.H. 738 & Sibley's: Bill more
yellow.

Dist. Africa, India, Ceylon, etc.

Hab. Usually arboreal tree tops, top
among branches. Sit motionless for
long period - gazing
about.

Food Fruits, flower-buds, insects,
eggs

Order: Indicatoridae

99

Piciformes

Family: Indicatoridae: Honey-guides
have zygodactylous toes. Some rather punch-
like

Distr. Africa: 2nd (Himalaya)

N/B Refer to Friedman, The Honeyguides
NBB Natmus. Bull No 208

100 Order: Piciformes

Fam: Ramphastidae Tucans

char: Zygodactylous - enormous bill
- superficially reminiscent of Bucerotidae
bill & size - see above with lightness
Tongue broad & thick

Distr: Neotropical

Habits: Feed on fruit sub-mimic to
but unable - it - to perch & eat by beak or
- rip of fruit from - don't catch - large
bill

Thought to be very dexterous they hop
on branches and climb

Reats: 2 feathers - wing - tail

Order Piciformes

101

Fam: Picidae : Woodpeckers, Picids.

102 Order Passeriformes

Form: Eurylaniidae: Broad bill,
char.: Distinct from all others & possessors by
talons connected :- 3rd & 4th toes partly
united (intermediate stage) Bill broad.
Heavy shape, stolid habits, bright colours, very noisy.

Dist: Typical of ~~Scandinavia~~ & Ind. Region
- agree with area of Borneo. 2nd found

1

Habits: Forest, feeds on seeds, insects & plant
Nests hanging, eggs spotted.



Fam.: Dendrocoptidae : Woods mites.

1st

Fam: Furnariidae sub-fa.

be long tarsi, strong feet

Nest: struc - styl of finewar - characteristics
of Patagonia - sub-region

Small, brownish (some)

Nest: Branch, top of bush etc, roost house
- lined with horsehair, rootlets etc -
bullets. - make large structure
shaped like baker's oven

105

Fam: Formicariidae. Dr. & Mr. ...

106

Fam: Omnophagidae: Ant. 61017s

Fam: Rhinocryptidae. Tapaculos.
Ch: Small wren-like birds, long
feet, straight claws.

dist: Sth Amer. W. L.H.

Habits: No Run actively ... gr.

Fam. Otidae. Tropic (Chatterers)
has one of great power and of the birds of
Tropical America from 3" to 18" -
is without some dull, broad and
goopy may.

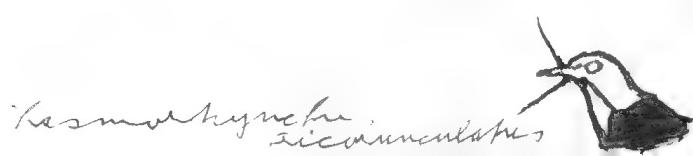
Best: Nestcap. On a occasion with the same

~~habits~~. Nesting. Recently, down a elaborate
hanging nest, some rough sticks
platform, some - holes + trees.

Cock-o'-the-rock Reproduct. occurs flight song broken white, single fl. in Richard's strong perf. feathers longer, compressed crest on head. Nesting in Balsa.

umbrella Bird Cephalopterus ornatus: Black
mettale green. beak yellow. large feathered
wattle hanging from breast, exceed-
large flattened crest. Guyana Amazonia

Bellbird ~~Zenaidura~~ *Zenornis* spp. white plus other
events. It's here with T. ~~and~~ ^{and} the
1st sp L3. Standardization of - courtesy



Fam: Pipridae • Nin n. n.

110

Fam: Tyrannidae: Tyrant Flycatchers.

Fam: Oxyrenciae. Sharphill.

Fam. Phytotomidae *Wesmaelius*

Exam: Pithidore 1744.

114

Fam Acanthisittidae : N.Z. Wrens

Fam: Philepittidae Asities, pitta-like

116

Fam: Menuridae - Lyrebirds

Fam: Africhornithidae: Scrub-birds.

Fam: Alaudidae. Lut.

Fam: Hirundinidae: swallows

120

Fam: Campylorhagidae Cuckoo Shrikes

Fam: Dicroidace Pronghs.

122

Fam: Oriolidae: Old World Orioles

Fam: Corvidae; Crows, Magpies, Jays, etc.

Fam Cracidae Pelicans
in 1 Division

185

Fam Grindelia Sparsa M.

126

Fam. Ptilonorhynchidae. Broadbills

Form: Paradisee with ground.

128

Fam. Paradoxornithidae (Perrotelli's, Suthora)

Fam: Parridae: Titivive

130

Fam: Sittidae : Nuthatches

Fam.: Hypostomidae (Gmelin) Weller

132

Fam Certitude . Frank

Fam: Chameidae · Wren-tits

1134

Family: Timaliidae: Babbler thrushes

Fam: Pygomyiidae; Pygalis

1186

Fam: Cinclidae : Divers

Pam: Troglodytes troglodytes

1138

, Fam: Mimidae: Thrashers, Mocking, Starling

Fam: Turdidae: thrushes

Fau : Zelardornis : Wren-thrushes

Fam: Sy'Villa: Old World marbles

142.

Fam: Regulidae: Kinglet (Gulderbos
Firecrack)

Fam: Muscicapidae:

Fam. Prunellidae: Accentors Hedge-sparrows

Fq 01: Motacillidae; Wagtails, Pipits

Egg: Bomb go illidae Wixwixi
char dark plumaged over colored brown head.
- 2 spp with wax-like oil appendage on wing

Distr: Palaeoarctic & Nearctic

Nesting: cup-shaped - - coniferous
migratory influxes.

mainly arboreal, rock crevices, usually below 1

n/o wax tip formed by fusion of soft
& pebbled with big granular one
Mk. 1 37

148

Fang : Philopteridae , Wky Flycatchers

Fam: Dellidæ. M. m. c. 500.

120

Family: Artamidae: Wood-swallows

Fam: Vangidae von J. S. Brügel

152

Fam: Laniidae : Shrikes

183

Fanj. Proposed New Services

154

Fam: Cycolarhidae Pepper-shrikes

Fam: Vireolaniidae · Shrike ~~Vireo~~ Vireo

Fam. Catridae: Wattle crows Hillas, saddlebacks
Dist. Conf. to N.Z.

Saddle back Philesturnus carunculatus
2 subspp. Both now very rare 8th & 9th dist.

Hab.: glossy black - back breast - and feet
black - wattle orange
sweet beak, white
nest - nest
Eggs pale grey with brown streaks

Hab.: Heteractochia acutirostris

Nth I. N.Z. prob. extant several about 1907.

Gen. colour glossy black purple gloss - wing,
white tail, orange wattle with tints



Feeds on tree fern leaves speckled fruit, the
N/B ♂ ate all, young wood for cassowary
parts & probably the soft tunnels where he
was buried. kept low to ground, rarely
flew top forest floor to 10 ft. -
nest in tree fern fern - close - dark.

Wattle crow Kereru Cathartes cinereus

2nd day 11th dist. So. N.Z.
brown whole plumage - much grey
velvety black - the bright areas of the
eggs stone grey speckled purplish grey
keep to ground, fly very little
feed fruit

Famy. Sternidae

Fam Meliphagidae honey-eaters

Australo-Papuan region - barely reaches
 Malaya - 1 sp. Brown Honeyeater -
Lichenornis indistincta reading Soli
 In N.Z. 3 indigenous, exclusive sp.

Stitchbird (Hibi) Notiomystes cinctus "Stitch name
 from call. Rather melancholic like steel-sawing"

Bell-bird Anthornis melanura reichenowi: silver green
 wings - purple head - some bell-like notes

Tui Prosthemadera novaeseelandiae

Metallic green - bluish purple reflection
 plumes - long plumes on head & neck
 Two white tufts on throat



18' 9

Fang-Nectariniidae, sunbirds

160

Fam: Diapidae. Flora - 601

Fam. Zosteropidae. Monotypy.

Fam: Vireonidae. Tr. - 5 (Greenlets)

Char: Small greenish-grayish-yellow-bellied warblers, variegated with spots, stripes, streaks.

Nat., Nth., cent. Am. America

Habitat: Leafy portions of trees.

Habits: Insects voracious

Nest: Ink & twigs suspended between branch forks - strips of bark gnawed off - bound together with spider-webs. eggs 3-5 - white-creamy - spotted brown - purple.

"But note that Wood-warbler - also do this in America"

N/B Appear to make place 3, old world cylindrical -
Neotropical & of most w. of acanthizid. ~~Altroca~~
~~& Eumecornis~~, everyone else - and

Fam. Coerebidae: *Hemimyialeptina*

164

Fam Drepanidae Harrison 1845 sp. pos.

Fam. - Pselidae Wood Warbler

166

Fam: Ploceidae: Weaver-finches

Fam: Icteridae: Blackbirds, Tropicbirds.

Char: Represent the Starlings & Sturnidae) the New World few which have completely excluded
up to now say the most is a long wavy quill. Black + black
tail now days - several Black + black
pedes - apis yellow and two
guttural red wels. Many with
tail: black & white tip. Sexes differ

Sabotants, (American) Blackbirds, (New World) Dendro-

Meadowlarks, Cowbirds: Some like
Bobolinks & cow bird have short sparrow like
bills.

Food insects, grain

Bowbirds: Molothrus ~~at~~: Polygamous, polyandrous,
and no nests, toy - nests roller birds

168

Fam: Tersinidae Walker & Mager

Fam. Thraupidae. Tri. Spizella

Chats: mostly small, - rarely all - is - small.
on the tree - so you will see -
verahe, by notch nose end of upper mandible
... and "Dentirostral Finsch's" stout,
rather heavily built males, how considerate -
not a damage - some branch out above
breast - Rich - a - white

Hist: Exser. Neohorsel - 58y female -

11th Avenue

Food: dessert > fruit

Nests etc etc etc . . . pushed out
etc . on horseback etc

Habitat: woodlands, rare

170

Fam: Catamblyrhynchidae: Pleob. cappa & Finsch

Fam: Fringillidae: Grosbeaks, Finches, etc.

char: Perhaps largest; usually black or dark
short, curved bill; feet very strong

dist: almost cosmopolitan: (Not and esp.)

Darwin's Finches: Geospiza spp.

Tree-finch: Comarhynchus pallidus comes with
Hood-pecker Finch black pp 8-9.

Fewer: Mayr & Sclater.

Perching Birds: Passerines

Classification: in Oscines? Lynx: 1847. Johannes Müller.

1) Eurylaimidae

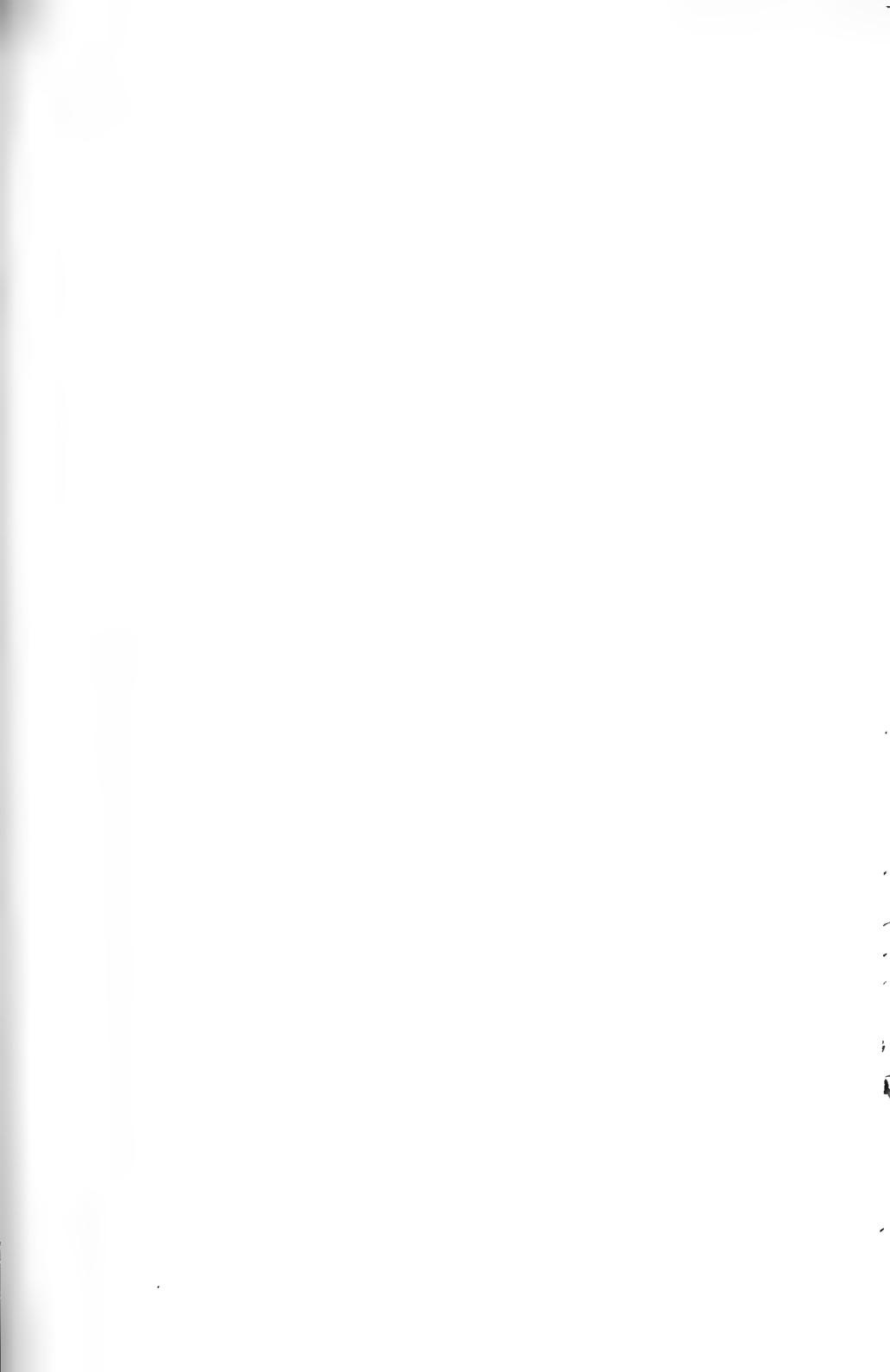
Broadbill. Upper-molars are above a gap with some non-suture, or well-defined & deep r. molars of two. Area of cervical vest. compared with it in no other Passerine.

Reviewing Passerines, into 2 groups

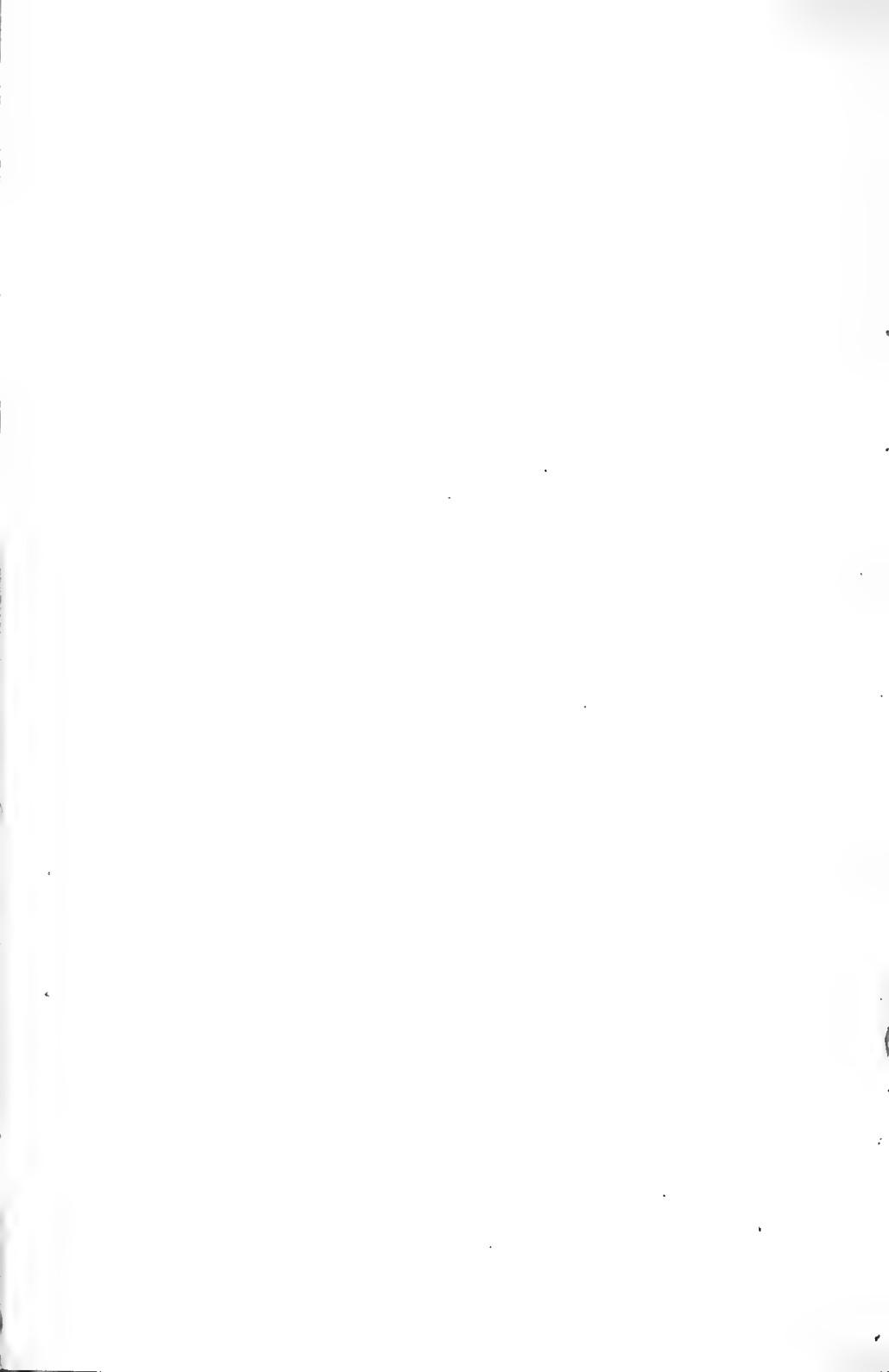
A: Mesomyodes, or Clamatores. Inferior muscles if any of squink attached to one of the ends or to the middle of bronchial half rings. (Bramblingidae agree with this & 1 b. subdivided)

B: Heteromyodes. Muscles attached to both ends of bronchial half rings.
Oscines or true songbirds plus: Strigidae, Mithidae, & Monachidae.
Only 2-3 pairs of squink muscles compared in these genera on table, with 5-7 pairs in large species but often intermediate.

If about 8600 species of living birds. about 5100 = Passerine (about 2000 Oscines) as a group the song birds are the most abundant, successful, and apparently distributed over the entire class Aves.







A

Falco 121
Alstroemersia
Robbingridae
Ardeidae 15
Adjutant 1
Anhimidae 19
Anatidae 19
Aramidae 29.
Alectro 64.
Auks 64
Anis 73.

B

Bacery Birds 0

Boobies 12
Pittering 15
Boat-billed Heron 15
Balancicipitidre 16
Bul 4
Black-necked 23
Bearded Vulture 23

Bustard Guad 36

Bustard 22.

Bucco 22

Bucconidae 97

Barbets 28

Bell-birds (Cotingidae) 108

Broadbill 102.

Bombycillidre 147.

Bolkbirds (CN 2-3) 158

Bobolinks 167.

Birds-Kombe 100

A
B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

C

Lisowir 3
Pithecetes 1
Colymbidae 5
Cormorants 13
Cochlearidae 15
Ciconiidae 17
Co scoroba swan 20
Cathartidae 21
Cochartes 21
Coracocora 25
Coryphaenoides 25
Cerurssawes 29
Cracidae 29
Crest 29
Copercaute 30
Crane 39
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Clucking-hen 27
Craig-Widow 29
Coots 11
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Carina 10
Crab Plover 36
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Flamingos 18
Falconet 26
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Franceschi 31
Fin-foots 42
Furnariidae 104

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G

Gannets 2
Grebes 5
Godfly Petrels ?
Jannets 12
Licee ?
Griffon Vulture 23
Woodpecker 24
Grouse 20 (Sandgrouse" 55)
? geese ?
Guineafowl 12
Gulls 2 3 6
Gullinules 11
Gullmorts 6?
Gullsuline 16
Greenlets 162
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Hammer Kop 16.
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Hemipodes 36.
Heroniflike ?
Hemipsonia lat 62.
Humming Birds 63.
" " 93.
Hornbills 98
Honeyguides 99
Ho. o..
Horned Coot 41.

I

Icerididae 7.
Ibis See also Threskiornithidae
Ibis 18
Indicatoridae 20
Icteridae 17

J

Turacidae 11.
Jacamaridae 20

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4/12
Kohiko ab

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1900-04-19 5:15
Wet
Lm entangled.

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Mother Carey's Chickens 2
Man-o'-war Birds 11
Tropicbirds 11
Miwogo 25.
Monkies 175. 2. 12
Megapodes 22
Megabirds 1
Moors 35
Peleagriidae 33.
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Oriole 100+

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Pedionomidae 37

Plain-warbler 16

Poophie 10

Puffins 64

Pteroclidae 58

Pygmy owl 10

Puffins 15

Jul 30' 85.

Q

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Ridge 2

Rooteles 15

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Scutigeridae

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Shag 13
Snake birds 14.
Shoe-billed Stork 15
Scopidae 16
Stork. 17
Scarlet Ibis 18
Spoonbills 18
Screamers 19. (Screamers 45)
Swans 19
Sarcocampyrus 20
Secretary Bird 22
Sagittariidae 22
Sage Hen 20
Sun-grebe-22
Syn-bitterns 24
Seriomas 25
Seed snipe 50
Sheathbills 60
Stercorariidae 61.
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Horned Gull *Fulica cornuta*

Diving birds: Gannets, Pelicans, Tropicbirds
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